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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,396	09/22/2000	Jacek Stachurski	TI-29493	2375

23494 7590 09/07/2006

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EXAMINER
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ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/668,396

**Applicant(s)**

STACHURSKI ET AL.

**Examiner**

Angela A. Armstrong

**Art Unit**

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on June 5, 2006, has been entered.

***Drawings***

2. The drawings are objected to because Figure 3a should be labeled Figure 3, as the Brief Description of the Drawings refers only to Figure 3. The Specification does not provide a description of either Figure 3 or Figure 3a. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

Art Unit: 2626

“Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

At page 6, last line, “Quantization 112” should be Quantization 110, as indicated in Figure 1.

At page 7, line 23, the phrase “Postfilter 144 with coefficients derived from LP parameters provides ...” is not a complete sentence.

At page 12, line 2, the Specification refers to Figures 3b and 3c, however the Drawings do not include figures labeled as 3b or 3c.

At page 13, line 12, “six 20-sample subframes” should be eight 20-sample subframes, to be consistent with the 160 samples referenced in element (1).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2626

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gersho et al (U.S. Patent 6,233,550) in view of Honda et al (U.S. Patent 6,377,916).

5. Regarding claims 1 as understood by the Examiner, the *Hybrid Coding* of Gersho et al reads on the features of the immediate application as follows:

- Gersho et al (with the title) reads on the feature in the preamble, of a *hybrid speech encoder having a linear prediction* (14 in figure 4A), *pitch and voicing data* (18, 44 & 46 in figure 4A) but is silent that the combination *includes a zero-phase equalization filter*. Honda et al (column 1 lines 20-27) reads on the feature that the combination of a *linear prediction, pitch and, voicing analyzer includes a zero-phase equalization filter* (column 3 lines 27-33).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to process all parameters of speech without the complexities of alternatively associating low bit-rate waveform segments.

- Gersho et al (column 4 lines 5-15) reads on the feature particular to claim 4, of *(b) a parametric encoder coupled to the analyzer* (termed *vocoder*).
- Gersho et al (claim 1 lines 62-63) reads on the features of *a waveform encoder coupled to the analyzer*.
- Gersho et al (col. 13, lines 17-22) reads on the features of *said analyzer classifies frames with voice activity as one of strongly-voiced, weakly-voiced, or unvoiced and said*

*parametric encoder encodes strongly-voiced frames and said waveform encoder encodes both weakly-voiced and unvoiced frames.*

- Where Gersho et al provides for a waveform encoder to include a pitch prediction filter (14), Gersho et al does not mention *a zero-phase equalization filter*, Honda et al (column 3 lines 27-33) reads on the feature where the *waveform encoder includes a zero-phase equalization filter*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to reduce spectral distortion.

6. Regarding claim 2 as understood by the Examiner, the claim is set forth with the same limits as claim 1. Where Gersho et al does not mention *a zero-phase equalization filter*, Honda et al (column 3 lines 22-23) reads on feature (e) *said zero-phase equalization filter has coefficients determined by said analyzer* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al to have the coded pitch position match the source impulse.

7. Regarding claim 3 as understood by the Examiner, the *Hybrid Coding* of Gersho et al reads on the features of the immediate application as follows:

- Gersho et al (in the title) reads on the feature, of a *hybrid speech encoder* and discloses the embodiments of the appropriate corresponding decoder for decoding the weakly-voiced frames and unvoiced frames (Figure 5; col. 14, lines 42-54).

Art Unit: 2626

- While Gersho et al does not explicitly disclose the combination, Honda et al (column 1 lines 20-27) reads on feature (a) *a linear prediction, pitch and, voicing analyzer*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to process all parameters of speech without the complexities of associating segments.

- Gersho et al (column 4 lines 5-15) reads on the feature particular to claim 4, of (b) *a parametric decoder coupled to the synthesizer* (termed *vocoder*).
- Gersho et al (claim 1 lines 62-63) reads on the features of *a waveform decoder coupled to the synthesizer*.
- Where Gersho et al provides for a waveform encoder to include a pitch prediction filter (14), Gersho et al does not mention *a zero-phase equalization filter*, Honda et al (column 3 lines 27-33) reads on the feature where the *waveform encoder includes a zero-phase equalization filter for decoding strongly-voiced frames*.

### ***Response to Arguments***

8. Applicant's arguments filed June 5, 2006, have been fully considered but they are not persuasive. Applicant argues the amended claims filters are not suggested by the references. The Examiner cannot concur as Gersho et al (col. 13, lines 17-22) reads on the features of said analyzer classifies frames with voice activity as one of strongly-voiced, weakly-voiced, or unvoiced and said parametric encoder encodes strongly-voiced frames and said waveform

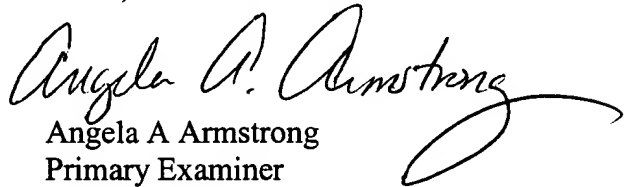
Art Unit: 2626

encoder encodes both weakly-voiced and unvoiced frames and provides for a waveform encoder to include a pitch prediction filter (14).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Angela A Armstrong  
Primary Examiner  
Art Unit 2626

AAA  
September 4, 2006